



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

C

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/526,904	03/07/2005	Yoshitaka Koshiro	262326US0X PCT	7852
22850	7590	09/14/2007		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER GILLESPIE, BENJAMIN	
			ART UNIT 1711	PAPER NUMBER
			NOTIFICATION DATE 09/14/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary	Application No. 10/526,904	Applicant(s) KOSHIRO ET AL.	
	Examiner Benjamin J. Gillespie	Art Unit 1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 12-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Wu et al ('492). Wu et al teach a golf ball comprising a core and cover, wherein the cover is a polyurethane that exhibits a coefficient of restitution between 50 and 90% and is the reaction product of high and low molecular weight polyol as well as aromatic diisocyanate (Abstract; Table 1). In particular, patentees explain that the high molecular weight polyol consists of polysiloxane diol and polytetramethylene ether glycol, wherein the polyols have an average molecular weight that coincides with applicants' claimed range (Col 2 lines 56-65; col 9 lines 25-29). The low molecular weight polyol consists of either propanediol or 1,3-bis(2-hydroxyethoxy) benzene, and the diisocyanate is 4,4'-diphenylmethane diisocyanate (MDI) (Col 7 lines 28-32, 43-44; col 11 lines 48-50, 55).
2. Regarding the claimed impact resilience at 0°C, since the claimed polyurethane shares identical reactants, as well as other mechanical values, i.e. the coefficient of restitution at room temperature, as Wu et al, the position is taken that it would inherently exhibit the same impact resilience at 0°C. Finally, concerning the claimed amounts of polyisocyanate, and high and low molecular weight polyol, based on the equivalent

Art Unit: 1711

ranges for each reactant and the breadth of the molecular weight ranges disclosed, the claimed ranges are satisfied by Wu et al (Col 13 lines 35-55).

3. Claims 12-14, 16-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Harris et al (2003/0078341) and Ward Jr ('361). Harris et al teach a golf ball cover comprising polyurethane which is the reaction product of high and low molecular weight polyol with MDI, wherein the resulting polymer is useful in golf balls and exhibits a coefficient of restitution of 0.7 (Paragraphs 11, 13, and 26). In particular, Harris et al teach that the polyurethanes are polyether based and may be further combined with polyether-siloxane based polyurethanes (Paragraph 14). Harris et al explain that that examples of such polymers are listed in U.S. Patent 4,675,361, which is incorporated by reference herein in its entirety.

4. U.S. Patent 4,675,361 (Ward Jr.) teach a polyurethane comprising the reaction product of hydroxyl-terminated polysiloxane, hydroxyl terminated polyethylene, MDI, and butanediol chain-extender (Examples 1 and 2). Although the examples are directed to using polyethylene based siloxane copolymer, column 6 explains that in addition to polyethylene, polytetramethylene ether glycol can be used instead of polyethylene (Col 6 lines 17-19).

5. Regarding the claimed impact resilience at 0°C, since the claimed polyurethane shares identical reactants, as well as other mechanical values, i.e. the coefficient of restitution at room temperature, as Harris et al, the position is taken that it would inherently exhibit the same impact resilience at 0°C. Finally, concerning the claimed amounts of polyisocyanate, and high and low molecular weight polyol, based on the

Art Unit: 1711

equivalent ranges for each reactant and the breadth of the molecular weight ranges disclosed, the claimed ranges are satisfied by Harris et al.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 15, 21-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harris et al (2003/0078341) in view of Wu et al ('261). As previously discussed Harris et al teach a golf ball cover comprising a polyurethane, which is the reaction product of an isocyanate terminated prepolymer and low molecular weight diol chain-extender. In particular, the prepolymer is the reaction product of high molecular weight diol and diphenylmethane diisocyanate (MDI), and the resulting polyurethane exhibits a coefficient of restitution (COR) of 0.7 or higher. However, Harris et al failed to teach chain extenders consisting of propanediol or 1,3-bis(2-hydroxyethoxy) benzene, instead only teaching compounds such as butanediol (Paragraph 21). It should be noted that the teachings of Ward Jr ('361) are incorporated by reference into the disclosure of Harris et al as discussed in paragraphs 3 and 4.

7. Wu et al ('261) also teach a golf ball cover composition comprising a polyurethane that is the reaction product of an isocyanate terminated prepolymer and low molecular weight diol chain-extender. In particular, the prepolymer is the reaction product of high molecular weight diol and MDI, and said diol chain-extender consists of butanediol, propanediol, and 1,3-bis(2-hydroxyethoxy) benzene (Col 5 lines 38-60; col

Art Unit: 1711

6 lines 9-14, and 16). Although there is no disclosure of the cover's COR, Wu et al explains that the cover preferable exhibits a value of at least 0.7, therefore one would reasonably expect the cover to exhibit analogous behavior since it is the desired property of the golf ball (Col 24 lines 54-60).

8. Furthermore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include the low molecular weight diol chain extenders of Wu et al in Harris et al based on the motivation that they are both being utilized in golf ball cover applications, wherein it is desirable to have similar mechanical behavior, and Wu et al disclosed that butanediol, propanediol, and 1,3-bis(2-hydroxyethoxy) benzene are suitable equivalents when chain extending the isocyanate-terminated polyurethane prepolymer cover, and the mere substitution of an equivalent (something equal in value or meaning, as taught by the prior art) is not an act of invention; where equivalency is known to the prior art, the substitution of one equivalent for another is not patentable, i.e. it would have been obvious. *In re Ruff* 118 USPQ 343 (CCPA 1958).

Response to Arguments

9. Applicant's arguments with respect to claims 12-26 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

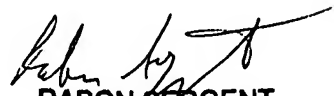
10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 1711

11. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin J. Gillespie whose telephone number is 571-272-2472. The examiner can normally be reached on 8am-5:30pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


RABON SERGENT
PRIMARY EXAMINER